U.S. Fish & Wildlife Service

News Release

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Plan To Recover Kauai Cave Species Released

Two small endangered cave animals found only on Kauai now have a complete and finalized plan that details the steps needed to bring them back from the brink of extinction. The U.S. Fish and Wildlife Service announced today the availability of the Final Recovery Plan for the Kauai Cave Arthropods.

The Kauai cave wolf spider and Kauai cave amphipod exist only in the lava tubes and cave-bearing rock in Kauai's Koloa Basin. The known population for the Kauai cave wolf spider – perhaps fewer than 30 individuals – is regularly found in a single cave, and population surveys for the Kauai cave amphipod indicate a range from 8 to over 300 individuals.

"These unique and highly specialized species are often overshadowed by Hawaii's charismatic species such as the green sea turtle, Hawaiian monk seal and others, but deserve just as much attention if not more," said Patrick Leonard, field supervisor for the Fish and Wildlife Service's Pacific Islands Fish and Wildlife Office. "The implementation of this plan by the Service, state and other partners will ensure the recovery of the species and raise awareness for these little known cave species."

Six broad recovery tasks are discussed in the final plan: protecting known cave systems where the Kauai cave wolf spider and amphipod exist; enhancing currently and recently occupied habitats; conducting research to gain additional knowledge of the species and their conservation needs; enhancing public knowledge of and support for protecting these species; validating recovery objectives; and developing a post-delisting monitoring plan.

The first priority identified in the plan is to protect the cave systems where these species still exist from human-caused destruction or degradation and to enhance their existing habitat. The cave amphipod is regularly found in three caves, including one where the cave wolf spider is found.

To protect the cave systems, the recovery plan recommends controlling human entry, preventing the destruction of native plant communities above the cave systems, developing and implementing a fire control plan for surface habitats, preventing introduction of and controlling currently present nonnative predators and competitors, preventing the introduction of bio-control organisms or bio-pesticides, and preventing contamination by pollutants such as insecticides and herbicides.

To enhance their habitats, the recovery plan recommends managing the habitat above the caves to encourage the growth of appropriate plants whose roots provide food and debris for the cave amphipod, and to increase the relative humidity in caves. These cave-dwelling species (known as troglobites) appear to require high humidity, perhaps as much as 100 percent.

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These two species were first discovered in 1971 and much about their conservation needs remains unknown. Research recommended within the plan includes studies:

- to determine local populations sizes and/or movement;
- to determine the most beneficial plants to be used for habitat improvement;
- to develop noninvasive ways to determine the status of populations;
- to learn more about regulating the humidity of caves and its effect on these species and nonnative ones;
- to look for additional occupied caves or restorable cave systems;
- to continue monitoring activities; and
- to determine the feasibility of moving wolf spiders into unoccupied cave systems.

Public education activities are encouraged to broaden knowledge of the Kauai cave species in the Koloa and Poipu area, and to engender public support for these unique creatures. Providing technical expertise and/or funding to implement land uses friendly to these species also is encouraged.

The Kauai cave wolf spider is a mid-size (0.50 to 0.75-inch) hunting spider that has completely lost its eyes as part of its adaptation to life in lava tubes. Instead of building webs, it chases and grabs its prey or may utilize sit-and wait ambush tactics. Unlike most wolf spiders that produce 100 to 300 spiderlings per clutch, the Kauai cave wolf spider is believed to produce fewer than 30 spiderlings per clutch. Newly hatched spiderlings are unusually large and are carried on the back of the female for only a few days.

The Kauai cave amphipod is a small (0.25 to 0.4-inch) pale landhopper that resembles a shrimp. Like the cave wolf spider, the Kauai cave amphipod has lost its eyes. It feeds on the decaying roots of surface vegetation that reach into the cave system, as well as rotting sticks, branches, and other plant materials. This amphipod is believed to be a food source for the Kauai cave wolf spider.

A draft version of this plan was released for public review in 2004. The Service received written comments pertaining to updated habitat maps and minor editorial comments, which were incorporated into this final plan. In addition, one comment raised concerns on cave access and the interpretation of lava tube collapse on cave habitat. These concerns were addressed in the comments section of this plan.

Availability of the recovery plan was announced in today's *Federal Register*. The recovery plan is available online through the Fish and Wildlife Service's website at http://pacificislands.fws.gov. Paper copies or a CD of the recovery plan may be requested by calling the Fish and Wildlife Service's Honolulu office at 808 792 9400.

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